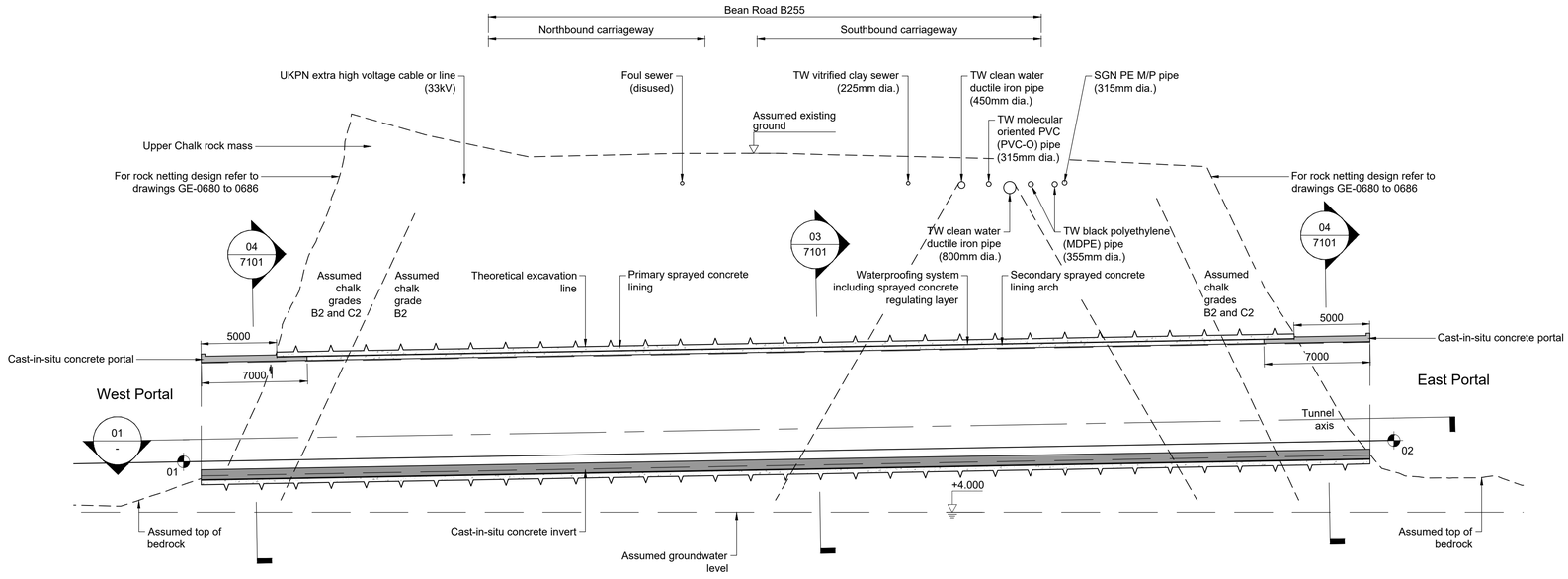
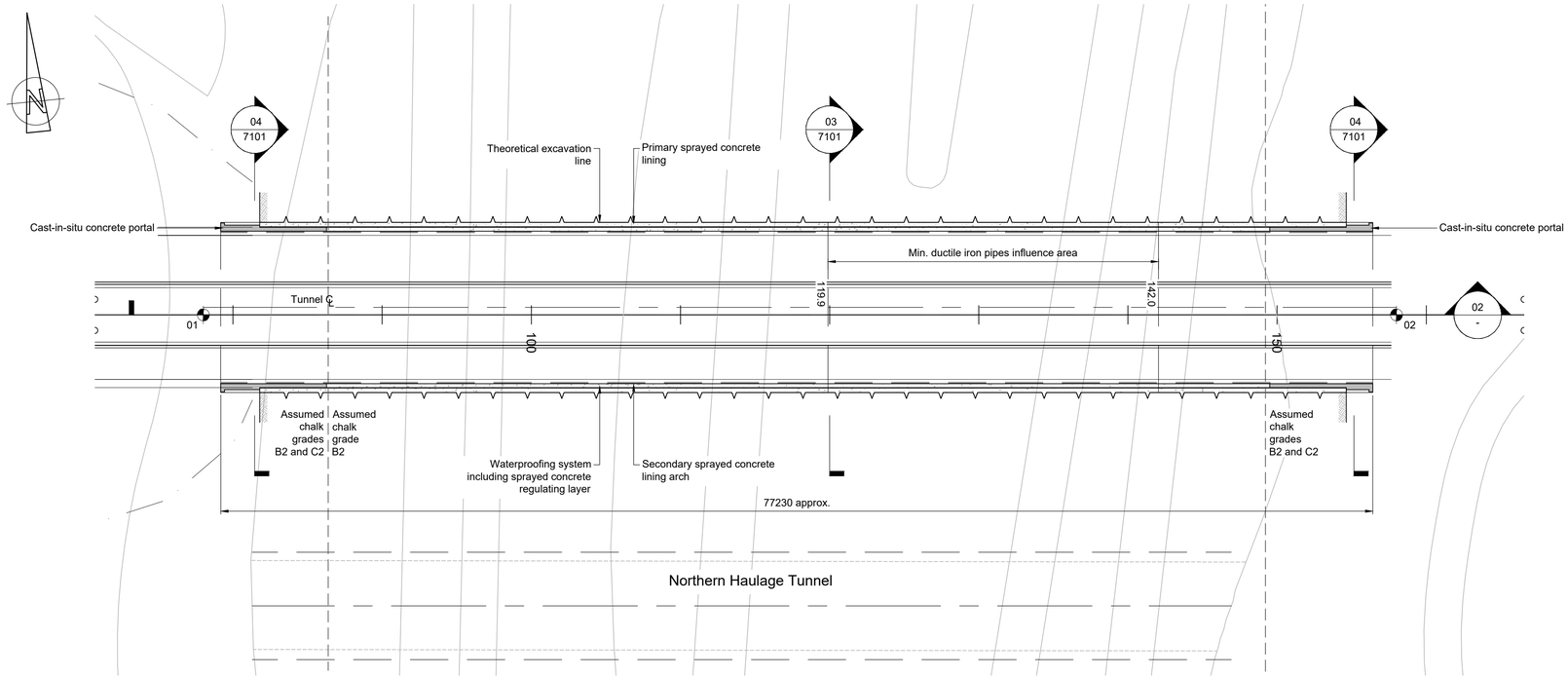

Bean Road B255
Northbound carriageway
Southbound carriageway
UKPN extra high voltage cable or line (33kV)
Foul sewer (disused)
TW vitrified clay sewer (225mm dia.)
TW clean water ductile iron pipe (450mm dia.)
SGN PE M/P pipe (315mm dia.)
Assumed existing ground
TW molecular oriented PVC (PVC-O) pipe (315mm dia.)
Upper Chalk rock mass
For rock netting design refer to drawings GE-0680 to 0686
04 7101
03 7101
TW clean water ductile iron pipe (800mm dia.)
TW black polyethylene (MDPE) pipe (355mm dia.)
Assumed chalk grades B2 and C2
Assumed chalk grade B2
Theoretical excavation line
Primary sprayed concrete lining
Waterproofing system including sprayed concrete regulating layer
Secondary sprayed concrete lining arch
5000
7000
Cast-in-situ concrete portal
West Portal
East Portal
01
02
Tunnel axis
+4.000
Assumed top of bedrock
Cast-in-situ concrete invert
Assumed groundwater level

Longitudinal Section 02-02



Plan 01-01

Setting-Out Coordinates				
ID	Easting	Northing	Level	Comments
01	558455.921	173502.459	+7.331	Reference line (crown of highway).
02	558535.547	173494.732	+8.757	Reference line (crown of highway).

4m 0 4m 8m 12m 16m 20m
SCALE 1:200

P04

RESIDUAL HAZARD	SUGGESTED CONTROL MEASURE
SIGNIFICANT RESIDUAL HAZARDS	

NOTE: The above hazards do not include every hazard or assumption, but identify significant residual construction hazards that are not likely to be obvious to a competent contractor and those that could be difficult to manage effectively. Refer also to the designer's risk documentation.

Dr. SAUER & PARTNERS

DO NOT SCALE FROM THIS DRAWING

NOTES

1. FOR TUNNELLING SPECIFIC NOTES REFER TO DRAWING BRT-TG-XX-TU-DR-TU-7001.
2. LOCATION OF UTILITIES ASSUMED AND TAKEN FROM FILE "UTILITIES MODEL" RECEIVED 07/10/20. CROWN OF UTILITIES ASSUMED TO BE 1.5m BELOW GROUND LEVEL.
3. THE 'MINIMUM DUCTILE IRON PIPES INFLUENCE AREA' WAS ASSESSED BASED ON THE ASSUMED DUCTILE IRON PIPE LOCATIONS. ACTUAL PIPE LOCATIONS TO BE VERIFIED BEFORE TUNNEL CONSTRUCTION START AND INFLUENCE AREA TO BE RE-ASSESSED IF LOCATION DEVIATION CONSIDERED SIGNIFICANT.

P04

4. THE TUNNEL SHALL BE STRAIGHT IN PLAN AND LONGITUDINAL SECTION AND THE SETTING OUT POINT NO.'S 01 AND 02 DEFINE THE ALIGNMENT.
5. THE TUNNEL START AND END LOCATIONS SHALL BE RELATIVE TO THE ROCK MASS SLOPE. THE TUNNEL CROWN (I.E. SECONDARY LINING INTRADOS AT TUNNEL CENTRELINE) SHALL EXTEND 5 METERS FROM THE COMPETENT ROCK MASS SLOPE AT PORTAL LOCATIONS AS SHOWN AND DIMENSIONED ON THIS DRAWING.
6. ALL DEBRIS SHALL BE REMOVED, AND ALL LOOSE ROCK SHALL BE SCALED DOWN FROM THE ROCK MASS SLOPE BEFORE TUNNEL CONSTRUCTION START.
7. ALL ROCK NETTING AS SHOWN ON DESIGN DRAWINGS GE-0680 TO 0686 SHALL BE IN PLACE BEFORE TUNNEL CONSTRUCTION START.
8. THE TUNNEL INVERT SHALL BE FOUNDED ON COMPETENT ROCK MASS IN THE TUNNEL PORTAL AREAS AND NOT ON SOIL OR DEBRIS.
9. THIS DRAWING CONTAINS THE FOLLOWING REFERENCES:
A120036_A1_Drawing_Border
BRT-TG-XX-ZZ-M2-HI-0105
OS_TQ5873
BRT-TG-XX-ZZ-M2-TU-7105
BRT-TG-XX-ZZ-M2-HI-0101
BRT-TG-XX-ZZ-M2-TU-7111
BRT-TG-XX-ZZ-M2-TU-7110

REV.	BY	CHK'D	APP'D	DATE	DESCRIPTION
P04	LCH	AFE	---	17/06/21	UPDATES IN RESPONSE TO UTILITY PROTECTION
P03	LCH	AFE	---	11/03/21	CAT3 CHECK COMMENTS CONSIDERED
P02	LCH	AFE	---	17/02/21	KCC, BB AND CAT3 CHECK COMMENTS CONSIDERED
P01	LCH	AFE	---	04/01/21	FIRST ISSUE

CODE: S4 — DRAWING STATUS: FOR STAGE APPROVAL

Tony Gee and Partners LLP
8th Floor, International House
Dover Place,
Ashford, Kent.
TN23 1HU
Tel: 01233 639787
www.tonygee.com
Consulting Engineers

Kent County Council kent.gov.uk

Balfour Beatty

BEAN TUNNEL
TUNNEL AND HIGHWAY
DETAILED DESIGN

TUNNELS
GENERAL ARRANGEMENT
PLAN AND LONGITUDINAL
SECTION

SHEET 1 OF 1

DRAWING. No.
BRT-TG-XX-TU-DR-TU-7100

DRAWN : LCH	DESIGNED : AFE	REVISION
SCALE : 1:200	ORIGINAL SIZE : A1	P04